

Remarks

This amendment is responsive to an Official Office Action dated April 4, 2006. A petition to revive this application accompanies this amendment.

The Claims of this application were examined and rejected under 35 USC § 103(a). All claims were rejected under 35 USC § 103(a) over House et al. (6,648,305) in view of Ewiff (6,848,678).

Each claim will be addressed individually, addressing the limitations of the claim which make it allowable as well as the teaching of the patents cited.

The patent 6,648,305, issued to Gary L. House, et al. was cited in the rejection as the primary patent inasmuch as it discloses pawl and ratchet system where the pawl nests within the opening between the teeth of the ratchet wheel. The pawl of the disclosure of the instant patent has a curved engaging surface that engages with a ratchet wheel having a plurality of teeth. The teeth individually are formed with a curved surface. The two extending legs project outward from the recessed surface or concave curved surface of the ratchet wheel forming a rounded tangential concave ratchet surface for engaging the end of the pawl which is also rounded and forms a stopping surface to prevent the unwinding of the tensioner.

The House et al. pawl, as disclosed and cited, is one which is rounded about an axis near its end. The pawl appears to be provided with a partial cylindrical surface forming a surface that engages a recess between the teeth of the ratchet wheel to prevent rotation of the ratchet wheel in an unwinding direction when under tension provided by the section of fence engaged with the tensioning cylinder 32.

The end of the pawl has been referred to by Examiner as “having a tangential end surface.” There has been no effort to define “tangential end surface” other than its use in the rejection. See

page 4 of the Office Action. The use of the “tangential end surface” is an admission that the pawl only engages one or two vertical lines where the rounded nose of the pawl is met by the tangent formed by the curved surface of the teeth of the ratchet wheel which the pawl engages when in position to resist unwinding movement.

The end of the pawl of House et al. does not have a “tangential end surface.” The House et al patent has a curved ratchet surface of the ratchet tooth contacts the pawl end in a tangential manner.

Applicant has provided a copy of the definitions of “tangent” and “tangential” for reference to the Examiner. These pages came from the internet version of the Merriam-Webster OnLine Dictionary as of November 2, 2006.

The pawl of Applicant’s Application is such that if it is punched or otherwise formed by a precision forming process, this pawl will not exert a force against any area of the curved surface of the notch into which it is inserted. This force may be exerted onto a line on the end of the of the pawl 50 and a line on the surface of the ratchet tooth. The ratchet tooth will guide the pawl into the tooth until it is blocked by engagement with the profile of the tooth if the pawl is slightly smaller than the profile of the notch. If the pawl is slightly larger than the surface profile of the tooth, it will engage the ratchet at two points or lines on the pawl and on two lines of contact with the tooth profile and fail to fully insert it self into the notch of the ratchet wheel. Thus it is apparent that the pawl may be engaged by the ratchet tooth in many ways, depending either upon the radius of the tooth with which the pawl is engaged or the configuration of the interior of the tooth on the tensioner ratchet wheel and the relative size of the pawl profile.

The pawl end of Applicant’s device is a planar surface positioned perpendicular to the pawl. This planar surface of the end of the Applicant’s pawl is designed to engage the planar shape of the .surface facets of the ratchet wheel of Applicant’s device.

Claim 1 has been amended to more clearly define Applicant's structure.

The operation of the pawl of Applicant is entirely different from that of House, et al. patent.

The ratchet wheel of Applicant is engaged with a minimum of clearance between the pawl end and the ratchet wheel. The pawl will align itself with the planar surface of the side of the notch on the ratchet wheel and thus align itself perpendicular to that surface.

Accordingly, the structure of the pawl engages the ratchet wheel in a stable manner and by engaging the surface of the ratchet wheel and the planar surface of the ratchet wheel. The planar surface of the end of the pawl aligns with the surface of the facets on the ratchet wheel and does not require the over-stretching of the fencing when the pawl engages the ratchet wheel.. This is important in the use of short spans of fencing material.

The ratchet wheel of House et al. requires the over rotation of the ratchet wheel, causing over-stretching of the fencing material when the ratchet wheel is tightened, by an amount exceeding an amount equal to about one-half the radius of the ratchet depression formed by adjacent teeth on the ratchet wheel multiplied by the ratio of the radius of (a) the tensioner drum and the coiled fencing and (b) the radius of the ratchet wheel, measured relative to the longer tooth of the ratchet wheel forming the depression into which the pawl fits to block the unwinding of the tensioner. (As seen in Fig. 7.)

Applicant's Claim 1 is allowable over House et al. and Reiff even if the patents are combined as suggested by Examiner because the Applicant's device provides a mode of operation dependent on the form of the pawl and ratchet wheel disclosed by Applicant and which is not taught by House et al.

With regard to Claim 2, the amended shape of the pawl as claimed is carried forward to all claims dependent on claim 1. Accordingly, Claim 2 is similarly allowable over House et al and Reiff.

With regard to Claims 3 and 4, all dependant claims contain all limitations of the parent claim; therefore this claim is allowable as discussed above.

With regard to Claim 5, the claim has been revised and amended to more clearly define the structural shape of the slot in the tensioner cylinder, to define over the prior art. The slot is formed into the cylinder extending parallel and radially to the axis of the cylinder. Applicant's improvement is the widening of the slot in those locations that accommodate the normal thickness of the fencing material and the reinforcing wires and the plastic coating covering them, while at the same time keeping the slot narrow at other locations so as to engage the webs between the reinforcing wires with a narrow slot. This configuration distributes the force of winding the web as well as the plastic coated wires of the fencing material onto the tensioner drum. This is accomplished by widening the slot at a plurality of locations along its length. The wide spots or locations are positioned such that the coated wires just slide into the widened portions and the narrower portions of the slot accept the webs of the fencing material into the depth of the slot.

The prior art, House et al. and the Reiff patents, disclose a channel cut about the tensioner cylinder circumferentially to permit the plastic coated wires to ride on the tensioner cylinder with the web of plastic in contact with the surface of the cylinder on the first wrap of the fence around the cylinder; however, the teaching of the prior art patent does not accept the enlarged portions of the fencing material into a portion of the slot parallel to the axis, while it accepts the web of the fencing between the reinforcing wires with a width slot that will distribute the forces of winding and tensioning more evenly across the full width of the fencing material.

Claims 6 and 7 are dependent upon Claim 5 and thus each incorporates the limitations of all earlier claims upon which Claims 6 and 7 depend, Claim 5, Claim 4 and Claim 1.

The limitations which are not met by the prior art found in Claims 5, 6 and 7, together with the limitations in Claims 4 and 1 make this claim allowable.

Claim 8 has been amended to reflect the amendments in Claim 1, into Claim 8.

Accordingly, Claim 8 is allowable over House et al. and Reiff.

Inasmuch as Claim 9 is dependent upon Claim 8, and Claim 9 contains all the limitations of Claim 8 and Claim 1 therefore Claim 9 is allowable for the same reasons Claim 8 is allowable.

With regard to Claim 10, the claim requires a widening of an opening in the tensioner cylinder and this widening extends through the cylinder as far as the opening extends. The reasons for this increase in width of the opening and its depth into the cylinder have been set forth above with regard to Claim 5. These reasons and arguments should be considered at this point as if set forth at this point and directed at Claim 10.

With regard to Claim 11, this claim has been amended to clarify it and to better claim the device. Claim 11 is dependent upon Claim 10 and is allowable for the same reasons that Claim 10 is allowable.

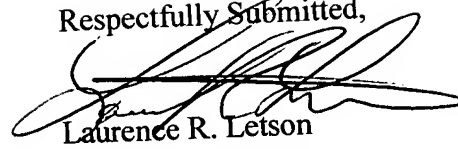
As Claims 12 and 13 depend from Claims 11 and 9, respectively, they necessarily incorporate all limitations of Claims 11 and 9 and all previous claims they depend on, and thus are allowable.

All of Applicant's claims are allowable because the prior art references do not disclose or teach or all of the limitations and the relationship of all the elements in Applicant's claims. These differences are discussed with reference to the claims in which the limitation first appears.

Applicant believes that all the claims of record are allowable over the disclosure and teachings of the prior art and particularly the disclosure and teachings of the House et al. and Reiff patents.

Applicant respectfully requests re-examination and reconsideration of all claims and a notice of allowance for the application.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Laurence R. Letson', written over a horizontal line.

Laurence R. Letson

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